

REMARKS

Applicant respectfully requests that the above-identified application be re-examined.

The August 20, 2008, Office Action ("Office Action") in the above-identified application rejected Claims 3-5, 14-18, and 23-26 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim that which applicant regards as the invention. Paragraphs 15-20 of the Office Action delineated certain alleged indefiniteness. Applicant has carefully reviewed the alleged indefiniteness and has amended the claims accordingly. Applicant respectfully submits that the claims, as amended, clearly obviate this grounds of rejection and, thus, requests that it be withdrawn.

The Office Action also rejected Claims 1-7 and 9-11 under 35 U.S.C. § 101. While application respectfully disagrees, in order to advance the prosecution of this application, independent Claim 1, the only independent claim in this group of claims, now recites "A computer implemented method...[including] the combined and full batches being supplied to the mixing apparatus according to the production run schedule," i.e., the claim now requires a computer implemented interaction between the computer and the mixing apparatus. The recited method is thereby intimately tied to the computer (a machine) well beyond the use of a computer in nominal fashion as suggested by the Examiner in paragraph 23 of the Office Action. Further, the method is now intimately tied to the mixing apparatus (another machine). Additionally, as a whole, the method itself transforms subject matter in that there is reduced wastage of dough, i.e., dough that was otherwise wasted is transformed into a bakery product by this method. Thus, applicant submits that Claim 1 and the rejected claims dependent therefrom now clearly fall within the scope of the statutory subject matter contemplated by 35 U.S.C. § 101.

The Office Action, specifically paragraphs 24 and 25, rejects all of the claims remaining in this application under 35 U.S.C. § 103(a) as obvious in view of the teachings of Walser, Bush,

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Lowry, and, in some claim instances, Abriam. Applicant respectfully disagrees. The following general comments are followed by responses to the specific issues raised in the Office Action.

General Comments

The present invention is concerned with producing a production run schedule of bakery products, reducing the degree of skill and experience required (see page 10, lines 13-16), and the efficient utilization of ingredients and equipment. The Walser reference relates generally to the field of manufacturing planning and optimization (col. 1, lines 7-8) and is intended to address the problem of unsatisfactory factory schedules (col. 1, lines 39-40). Although Walser uses broad terms, Walser is clearly directed to complex factory environments. The present invention is concerned with a single piece of equipment. Efficient operation of a mixing apparatus in a bakery requires a full batch to be loaded into each batch, therefore there is no need for size variation.

In view of the longstanding practice of manually preparing bakery production schedules, applicant submits that there is an inventive step in the recognition that such production schedules can be improved by a systematic approach. Applicant also submits that there is a further inventive step in a systematic approach that includes the aggregation of batches. There is nothing in the Walser reference to suggest that the production scheduling of bakery products might be improved by a systematic approach. Further, even once having recognized the problem, or having arrived at the idea of a systematic approach to production run scheduling of bakery products, there is no reason why a person skilled in the art would turn to the Walser reference. Any relevance of the Walser reference only becomes apparent with the benefit of the impermissible use of hindsight. Even then the relevance of the Walser reference is tangential at best. There is no suggestion in Walser that the idea of batch aggregation could be applied to bakery products, much less the specific details of the methodology recited in the claims.

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The Office Action goes into great detail to set out where in the Walser reference each of the steps of the method are said to be disclosed. In each instance, the alleged disclosure is vague and unclear, the relevance of the disclosure only becoming apparent with the benefit of study and the impermissible use of hindsight. In particular, applicant sees no disclosure of "calculating the number of full batches that can be produced of each type of bakery product, a full batch being based on the consumption of whole bags of flour," much less combining these "left over" portions. These specific features are not in any way taught or suggested by the vague statements set out in the Office Action.

In summary, the present invention is concerned with producing a production run schedule of bakery products and includes specific method steps. The Walser reference at best vaguely discloses batch aggregation. There is no suggestion that batch aggregation might be applied to producing a production run schedule of bakery products or the claimed methodology.

These serious deficiencies are not remedied by the other references. The Bush reference is a media "puff piece" discussing a computer controlled bakery. There is nothing in the Bush reference that would lead a person skilled in the art to recognize that production run scheduling might be improved by a systematic approach including aggregating batches. Further, even once having realized that production run scheduling of bakery products might be improved by such an approach, there is no reason why a person skilled in the art would turn to the Bush reference. Even if considered relevant, there is nothing in the Bush reference that teaches batch aggregation, much less the specific methodology recited in the claims. Thus, the Bush reference suffers the same deficiencies as the Walser reference.

The Lowry reference relates to automatically extruding and cutting of dough based products. This reference is not in any way relevant to the present invention and adds nothing. Similarly, the Abriam reference is wholly irrelevant. Abriam is directed to computer aided

machining. It has no relevance to scheduling a production run of bakery products. A person skilled in the art, e.g., a baker, is unlikely to turn to either Lowry or Abriam when faced with the problem of producing a production run schedule of bakery products.

Specific Comments

Paragraph 25 - Claim 1

A computer implemented method of producing a production run schedule of bakery products

Applicant understands from pages 5 and 8 of the Office Action that the Examiner considers the combination of the Walser and Bush references to show this feature. As correctly noted at page 8 of the Office Action, the Walser reference does not disclose batch production and scheduling of bakery products. The Bush reference merely discloses mixers that cycle automatically. Applicant has not been able to locate any suggestion in the Bush reference of scheduling of the mixers, i.e., the Bush reference states that the mixers do operate, but does not discuss when and how the mixers are to operate.

In response to determining the number and type of bakery products to be produced, determining the dough type and weight of dough of each bakery product

Based on page 5 of the Office Action, applicant understands that the Examiner reads "determining the dough type and weight of each bakery product" as equivalent or analogous to "determining the type and size of each product." This overlooks an important distinction. The present invention is concerned with starting with a requirement for bakery products (for example, loaves of bread and bread rolls), determining the dough requirements to meet those demands, and then optimizing the scheduling of the mixing of the dough. As noted in the Office Action, the Walser reference describes optimizing the flow of a single product stream. In the paint example referred to in the Office Action, the production of a single product, i.e., the paint, is optimized by

various aggregation steps. There is no suggestion that a demand for paint be converted into a demand for a paint ingredient, i.e., a dough analogue, so that the processing of that paint ingredient may be optimized as in the present invention. The Walser reference therefore fails to disclose the step of determining the dough type (or anything analogous thereto). This is an important distinction, as will become apparent because the latter steps in the method include decisions and operations based on the dough type.

Organizing each bakery product into a group according to the dough type of the bakery product

The Walser reference is concerned with optimizing the production of a product. For example, as set out in the Office Action, col. 4, lines 31-32, of Walser recite "input 16 may include one or more demands for a product..." (emphasis added). The paint example in Figures 3 and 4 of Walser relate to producing different size batches of a single type of paint at different times to best meet differing demands. Nothing in these diagrams suggests organizing each bakery product (or bakery product analogue such as paint) into a group according to the dough type (or dough type analogue).

Calculating a total weight of dough for each type of bakery product to be produced

The Office Action indicates that the Walser reference discloses "determining the total size of product to be produced..." and again makes reference to the paint example. As above, Walser at best discloses "determining the size of a product..." (emphasis added). Walser therefore plainly fails to disclose "calculating a total weight of dough for **each** type of bakery product " (or bakery product analogue) (emphasis added). Applicant understands that this is believed to be anticipated by the combination of Walser, Bush, and Lowry (at page 10 of the Office Action). Applicant disagrees. The Bush reference is not concerned with production scheduling. Applicant has been unable to locate anything in the Bush reference of relevance to

this calculating step. The Lowry reference at best merely discloses weighing in a bakery setting. Neither Bush nor Lowry remedies the serious deficiencies of Walser.

Calculating the number of full batches that can be produced of each type of bakery product, a full batch being based on the consumption of whole bags of flour

Applicant has been unable to locate anything in the references analogous to "full batch being based on consumption of full bags of flour." As set out in the Office Action, the Walser reference is concerned with reducing the quantity of work in process, minimizing end item inventory, reducing product shortages, and reducing late deliveries. There is no suggestion in Walser of the use of full bags of flour, or any analogue thereof. The Walser reference uses broad and sweeping language to describe a range of possible benefits, but there is no suggestion of the use of discreet units of input materials, much less that full bags of flour should be used so as to solve the problem that partially full, opened bags need to be decanted and weighed prior to use (see page 2, paragraph 1, of the subject application).

The Walser reference is concerned with optimizing production of a single type of product and therefore, plainly, fails to disclose "calculating the number of full batches that can be produced of **each** type of product" (emphasis added).

While the Bush reference mentions the use of flour in baking, there is nothing in Bush to suggest that a full batch should be calculated based on the consumption of whole bags of flour.

Calculating a weigh of dough for each bakery product that cannot be produced in a full batch

As the Walser reference fails to disclose the concept of a full batch (as defined in the claim), it follows that the Walser reference also fails to disclose the step of calculating a weight of dough for each bakery product that cannot be produced in a full batch. The Office Action points to a statement in the Walser reference indicating the word aggregate should be interpreted

as splitting or dividing a product between multiple batches, as well as combining product demands into a batch. The Office Action places this quotation alongside a broad statement from Walser to do with aggregating and scheduling product batches. Even with the application of impermissible hindsight, it is not possible to discern the specific step of "calculating a weight of dough for each bakery product that cannot be produced in a full batch" from the vague words of Walser. The claim plainly contemplates calculating the "leftover demand" for bakery product that cannot be produced in a full batch, for example, a number of bread rolls that would require half a bag of flour. Applicant has been unable to locate an analogue of this feature in any of the Walser, Bush, or Lowry references.

Combining the respective weights of dough for bakery products of the same dough type that cannot be produced in a full batch into combined batches

As Walser fails to disclose the "leftover demand" portions (i.e., the weights of dough that cannot be produced in a full batch), it follows that Walser also fails to disclose combining these leftover demand portions. Similarly, as above, Walser also fails to disclose differing dough types or analogues thereof.

Displaying the full and combined batches on a computer display to permit subsequent amendment

The Walser reference mentions a solution output and a computer. The Walser reference fails to disclose full batches, or combined batches, and therefore fails to disclose or suggest displaying the full batches or combined batches on a computer. Additionally, applicant has been unable to locate any suggestion in the Walser reference that the computer display would be so as to permit subsequent amendment.

Paragraph 25 - Claims 2-7 and 9-11

Claims 2-7 and 9-11 depend from Claim 1. It follows that these claims also have an inventive step over the cited references for the reasons discussed above.

Paragraph 25 - Claims 12-18 and 21-26

As noted by the Examiner, these claims recite a system and computer program for performing the method of the above claims. Again, it follows for the reasons discussed above that these claims have an inventive step over the cited references.

Paragraph 25 - Claims 11, 19 and 20

Claims 11, 19, and 20 depend from claims which applicant submits are allowable. It therefore follows that these claims are also allowable. Applicant also adds the additional comment that the broad disclosures of the Bush reference are not equivalent to the specific limitations recited in these claims. Specifically, Bush does not suggest that the computer controlled mixers be linked to a computer configured to operate in accordance with any particular method of production run scheduling. Claim 20 requires that the bakery machinery provides feedback to **the program** (i.e., the scheduling program) (emphasis added).

Paragraph 26 - Claim 11

The Abriam reference relates to computer aided machining and therefore has no relevance to producing a production run schedule of bakery products. In any case, the text from Abriam set out in the Office Action recites "the parts on the job list are super imposed **on a work piece** icon... (emphasis added). Therefore, if any teaching or suggestion relevant to a bakery setting is to be taken from the Abriam reference, it is to do with the layout of parts on a work piece, e.g., indicating where cookies may be cut from a layer of cookie dough. This is not the same as, and is not relevant to, providing a schematic layout of dough pieces on baking trays.

New Claims

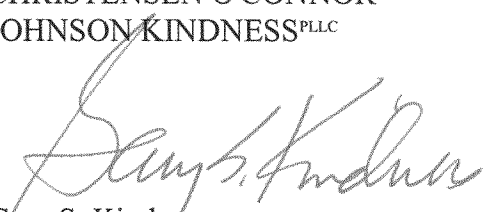
New Claims 27 and 28 have been added. The basis for these new claims is found on page 9, lines 16-19, of the application.

CONCLUSION

Applicant submits that there is nothing in the prior art of record and not relied upon to render the invention as claimed obvious. In view of the foregoing, applicant respectfully submits that all of the claims remaining in this application are clearly allowable. Consequently, early and favorable action allowing these claims and passing this application to issue is respectfully solicited.

Respectfully submitted,

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